

363 HAT SS

Work Order ID 105619

Thursday, August 08, 2013 2:36:24 PM

105619

Page 1

Item ID: D3121-21

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Bolt

Stop

NS2

Start Date: 8/8/2013 Start Qty: 60.00

60

Cust Item ID:

Required Date: 8/22/2013 Req'd Qty: 60.00

60

Customer:

Reference:

Approvals: Process Plan: MUS

Date: 13-08-09 Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
----------	--------------

D3121	Rev E
-------	-------

100	
-----	--

100	Hardinge CNC LATHE SMALL
--------------	--------------------------

Hardinge	Memo
----------	------

Hardinge CNC Lathe Small	1-Turn D3121-21 2-Identify as D3121-213-Deburr break all sharp edges 0.005" to 0.010"
--------------------------	--

110	QC2- Inspect parts off machine FAI/FAIB
-----	---

110	Memo
--------------	------

QC	
----	--

Quality Control	
-----------------	--

120	QC8- Inspect parts - second check
-----	-----------------------------------

120	Memo
--------------	------

QC	
----	--

Quality Control	
-----------------	--

Date: 13-08-09 Tooling:

Date:

Run

Start

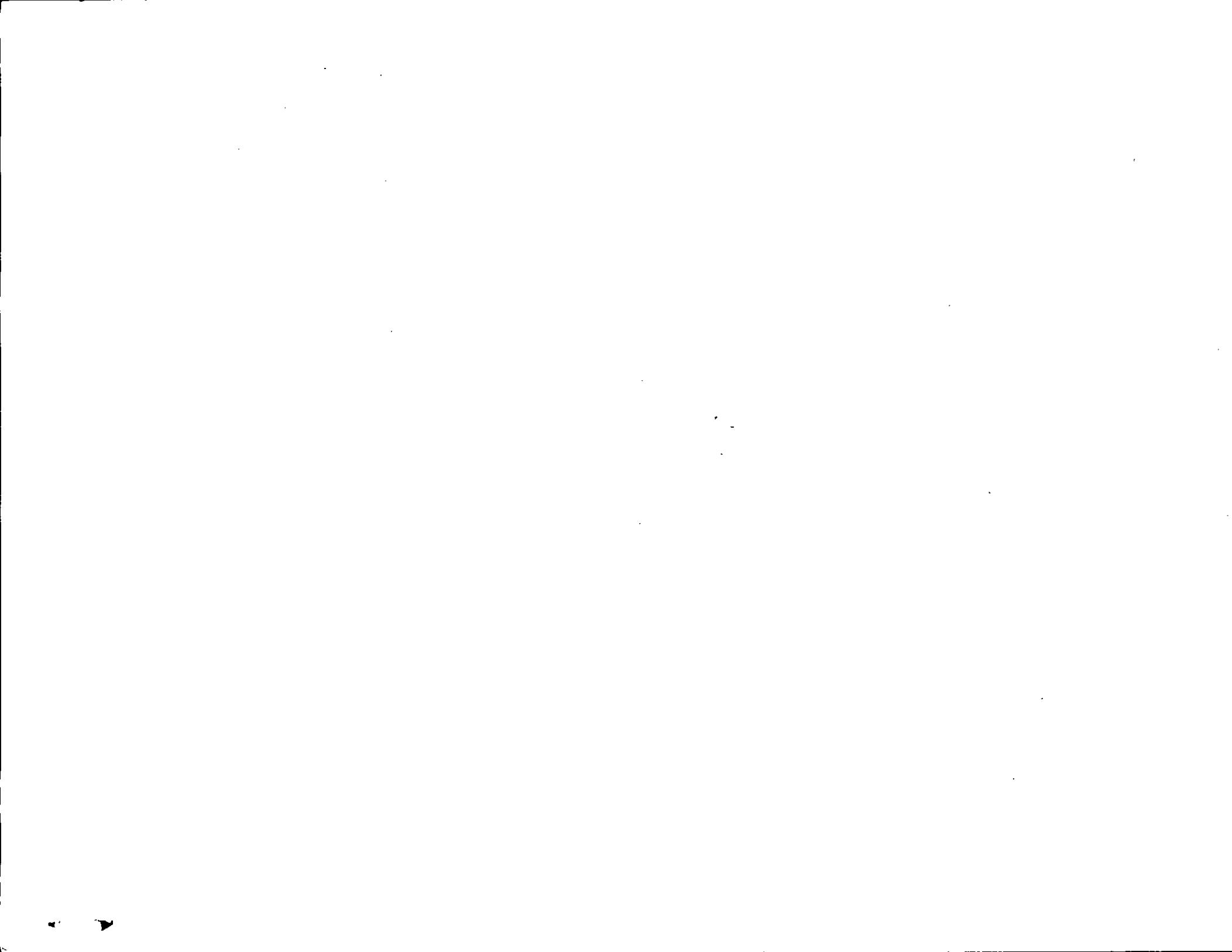
NR1

Date:

Date:

Stop

NR2



Work Order ID 105619

Thursday, August 08, 2013 2:36:24 PM

105619

Page 2

Item ID: D3121-21

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Bolt

Stop

NS2

Start Date: 8/8/2013 **Start Qty:** 60.00

60

Cust Item ID:

Required Date: 8/22/2013 **Req'd Qty:** 60.00

60

Customer:

Reference:

Approvals: **Process Plan:**

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

**Sequence ID/
Work Center ID**

**Operation
Description**

130

Identify as per dwg & Stock Location: ST235

**Set Up/
Run Hours**

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

Packaging

Packaging

Memo

0.00

60X ⁰⁴
²⁸ / 13-09-10

140

QC21- Final Inspection - Work Order Release

0.00

140

QC

Quality Control

Memo

0.00

13/9/11 D

AB-0911

25

Picklist Print

Thursday, August 08, 2013 2:36:29 PM

Page 1

Work Order ID: 105619

105619
D3121-21

Parent Item: D3121-21

Parent Item Name: Bolt

Start Date: 8/8/2013

Required Date: 8/22/2013

Start Qty: 60.00

Required Qty: 60.00

Comments: IPP A04.02.09New issueKJ/DS
IPP Rev:B ECN 1060 07-11-12 DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M303H0.500		Purchased	No			110	f	3.1270	0.0417	2.502			

M303H0.500

303 HEX BAR .500

**

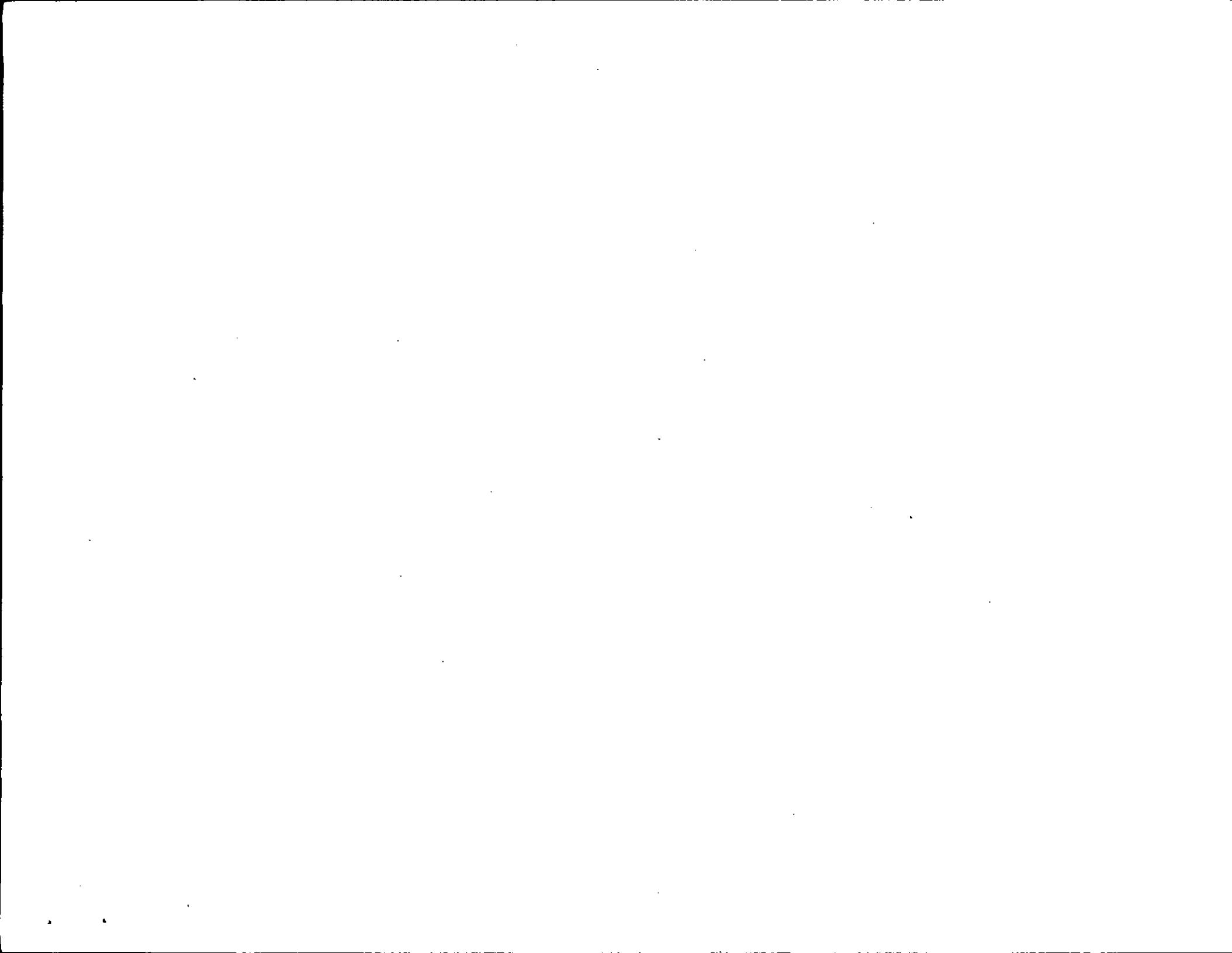
DAS
40
9-89

13/09/09

Location	Loc Qty	Loc Code
MAT018	3.127	
→ 124761	3.127	
→ 124724		

.45
2.25

→ END OF BATCH



DART AEROSPACE LTD	Work Order:	105619
Description: Bolt	Part Number:	D3121-21
Inspection Dwg: D3121	Rev: E	Page 1 of 1

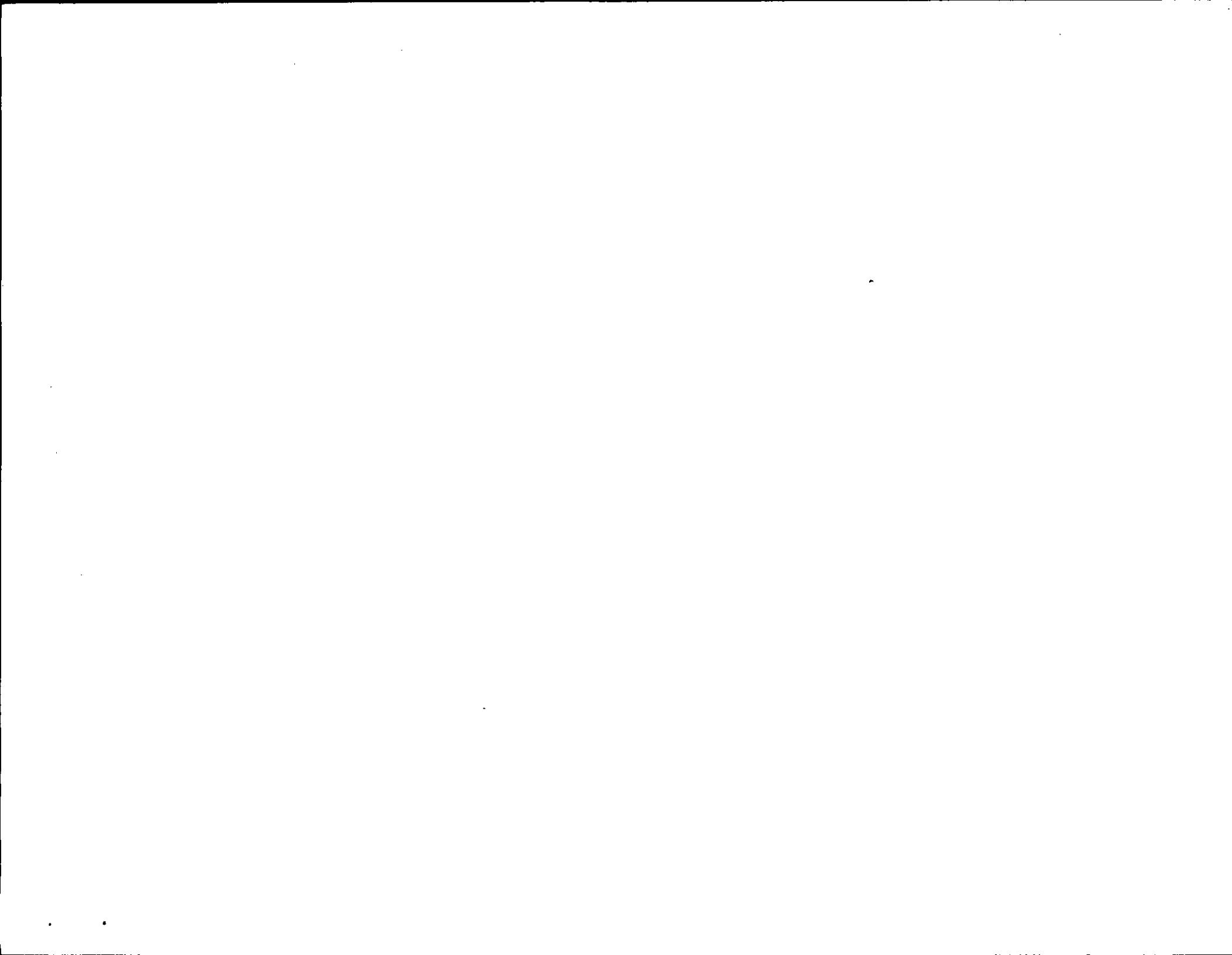
FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

QAC

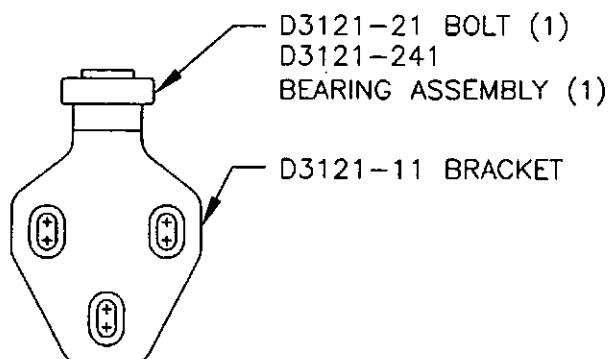
Measured by:	40 9-85	Audited by:	<i>JG</i>	Prototype Approval:	N/A
Date:	13/09/09	Date:	13-09-09	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	04.02.27	New Issue	KJ/RF	
B	06.03.09	Dwg Rev. updated	KJ/JLM	
C	06.06.14	Dwg Rev. updated	KJ/JLM	
D	08.01.16	Dwg Rev. updated	KJ/EC/DD	
E	08.07.23	Dimensions updated	KJ/DD	

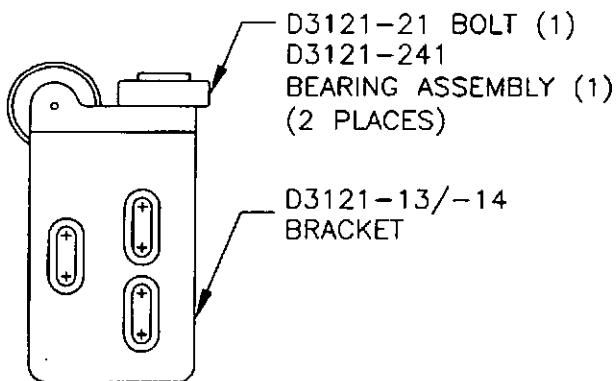


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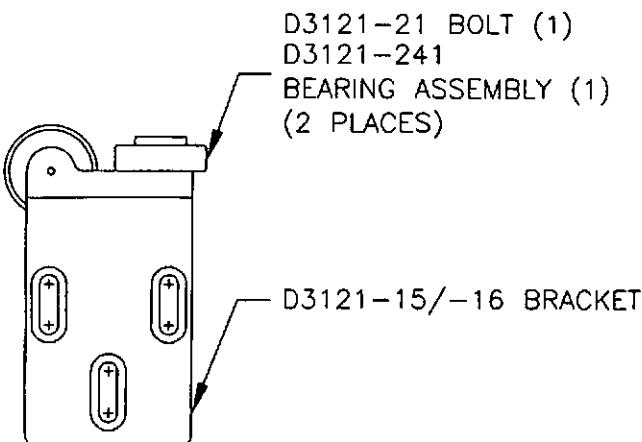
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CHECKED <i>4</i>	APPROVED <i>-</i>	DRAWING NO. D3121	REV. E	SHEET 1 OF 10
DATE 07.11.07		TITLE BRACKET ASSEMBLY	SCALE 1:2	
A	02.04.15	NEW ISSUE		
B	03.01.16	ADD RIDGES; ADD MAT'L PROP; FIX P/N ADD -141/-143/-144/-145/-146		
C	04.02.17	ADD CLEARANCE; USE -241 BEARING		
D	06.05.17	D3121-25 CAP WAS 1.024, NOW 1.000		
E	07.11.07	ADD TOLERANCE TO 0.032 (DETAIL B)		

RELEASED
07.11.07 *WD*

D3121-041 BRACKET ASSEMBLY
(REPLACES PREMIER P/N B30-23000-33)



**D3121-043 (SHOWN) / D3121-044 (OPPOSITE)
BRACKET ASSEMBLY**
(REPLACES PREMIER P/N B30-23000-37/-38)

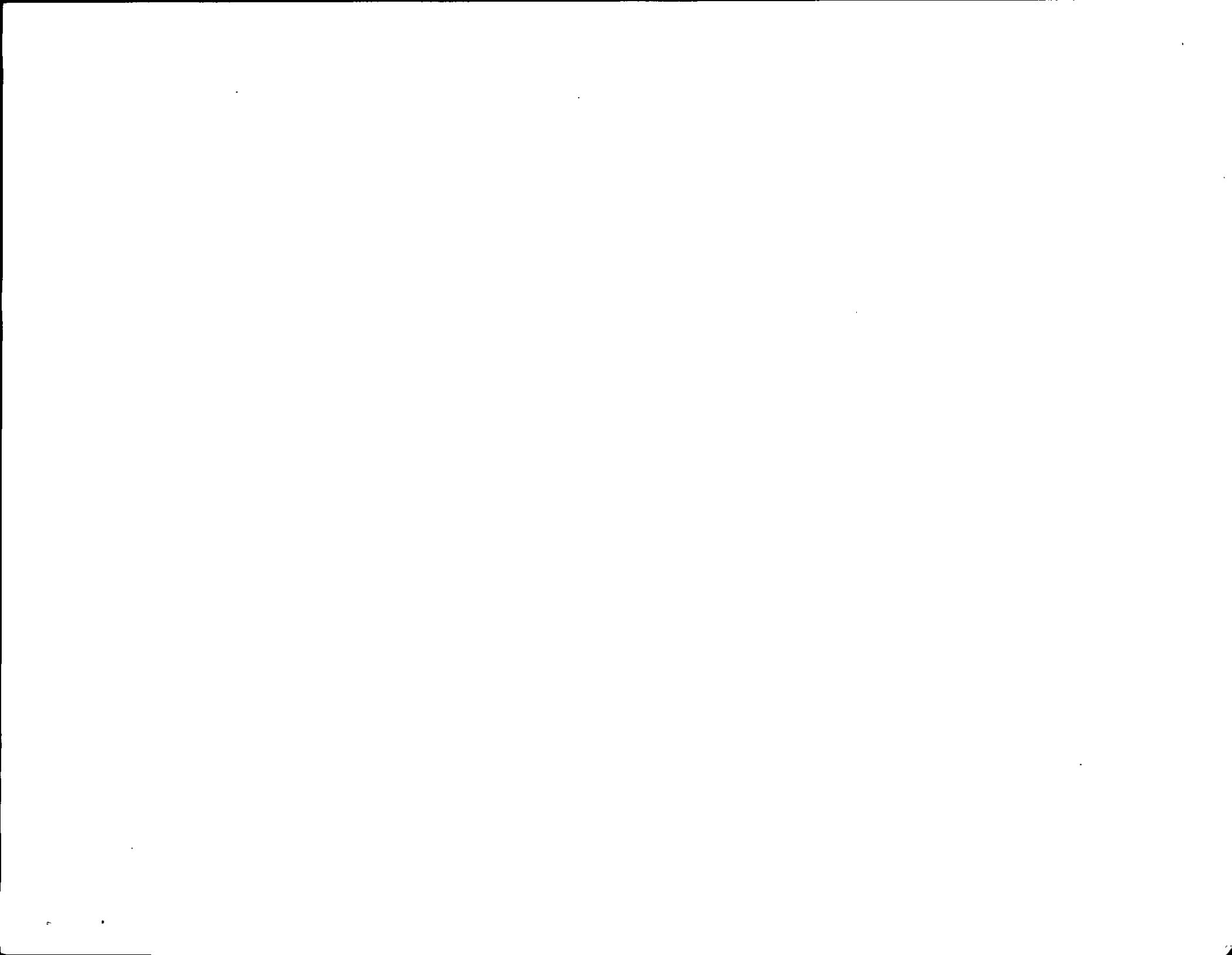


**D3121-045 (SHOWN) / D3121-046 (OPPOSITE)
BRACKET ASSEMBLY**
(REPLACES PREMIER P/N B30-23000-35/-36)

10566
13-08-04
058

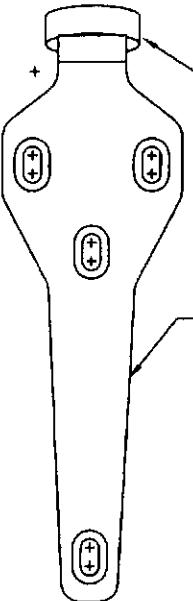
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DATE 07.11.07		TITLE BRACKET ASSEMBLY	SCALE 1:2

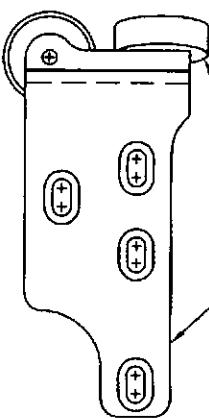


D3121-21 BOLT (1)
D3121-241
BEARING ASSEMBLY (1)

D3121-141 BRACKET ASSEMBLY
(REPLACES PREMIER P/N B30-23001-01)

D3121-111 BRACKET

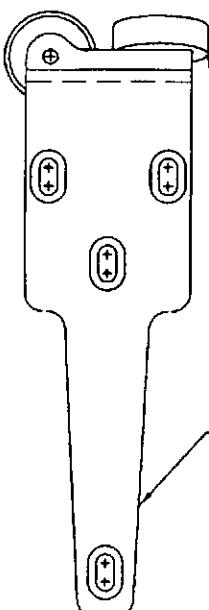
RELEASED
07/11/07



D3121-21 BOLT (1)
D3121-241 BEARING ASSEMBLY (1)
(2 PLACES)

D3121-113/-114 BRACKET

**D3121-143 (SHOWN) / D3121-144 (OPPOSITE)
BRACKET ASSEMBLY**
(REPLACES PREMIER P/N B30-23000-03/-04)



D3121-21 BOLT (1)
D3121-241 BEARING ASSEMBLY (1)
(2 PLACES)

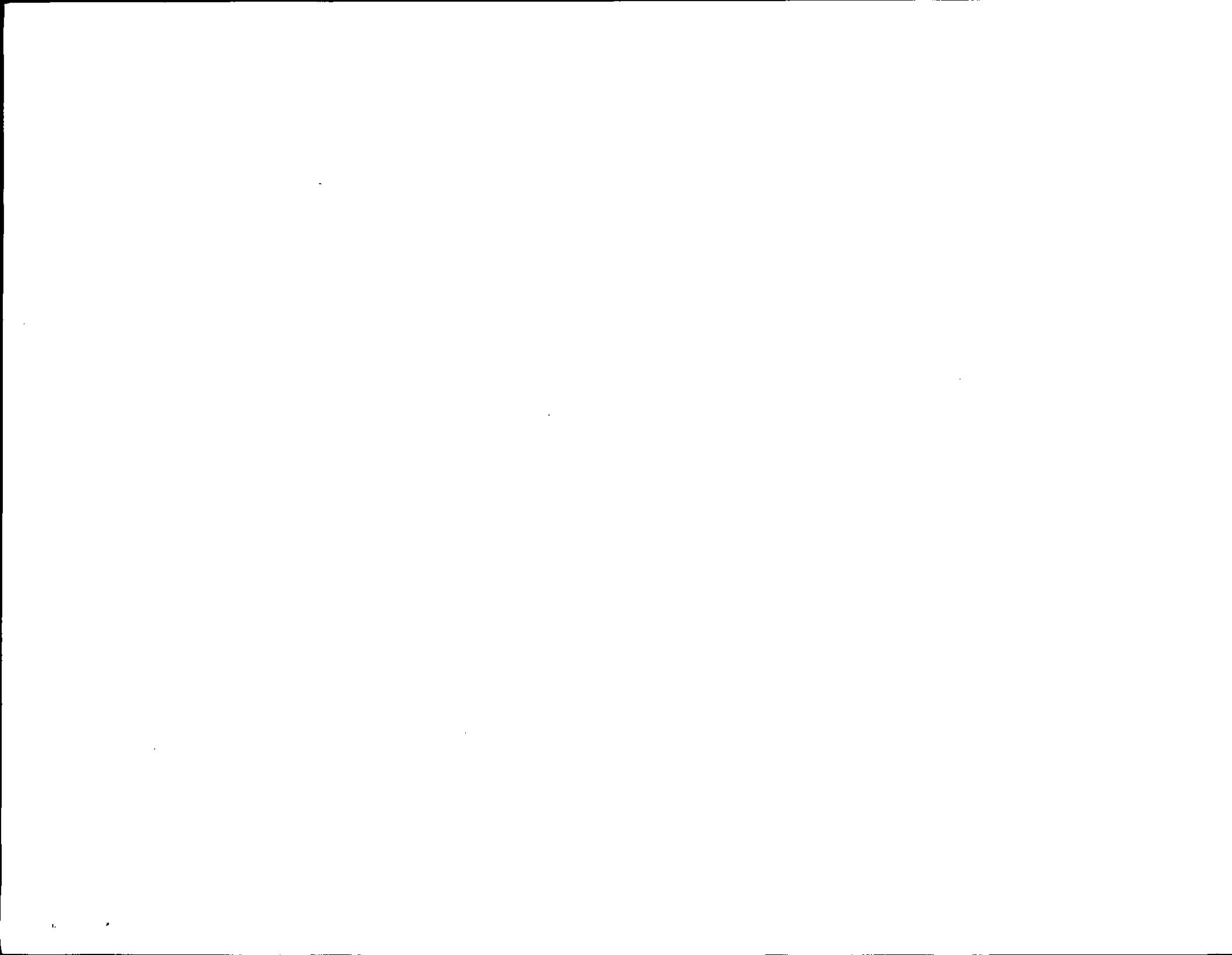
**D3121-145 (SHOWN) / D3121-146 (OPPOSITE)
BRACKET ASSEMBLY**
(REPLACES PREMIER P/N B30-23000-05/-06)

D3121-115/-116
BRACKET

5/2001

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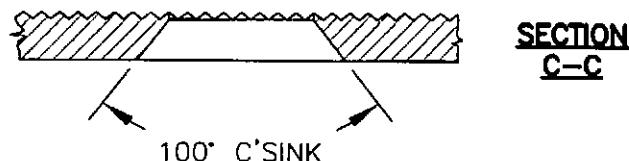
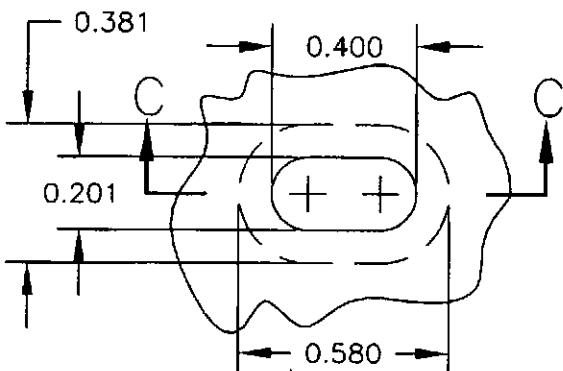
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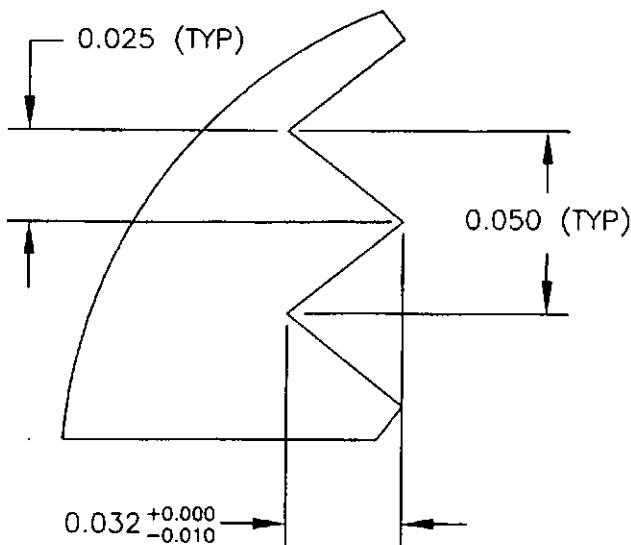
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CHECKED <i>4</i>	APPROVED <i>-H</i>	DRAWING NO. D3121
DATE 07.11.07	TITLE BRACKET ASSEMBLY	REV. E SHEET 3 OF 10 SCALE 1:1

DETAIL A:
SLOT DETAIL
SCALE 2:1
VIEW ROTATED



RELEASED
07.11.07 *[Signature]*

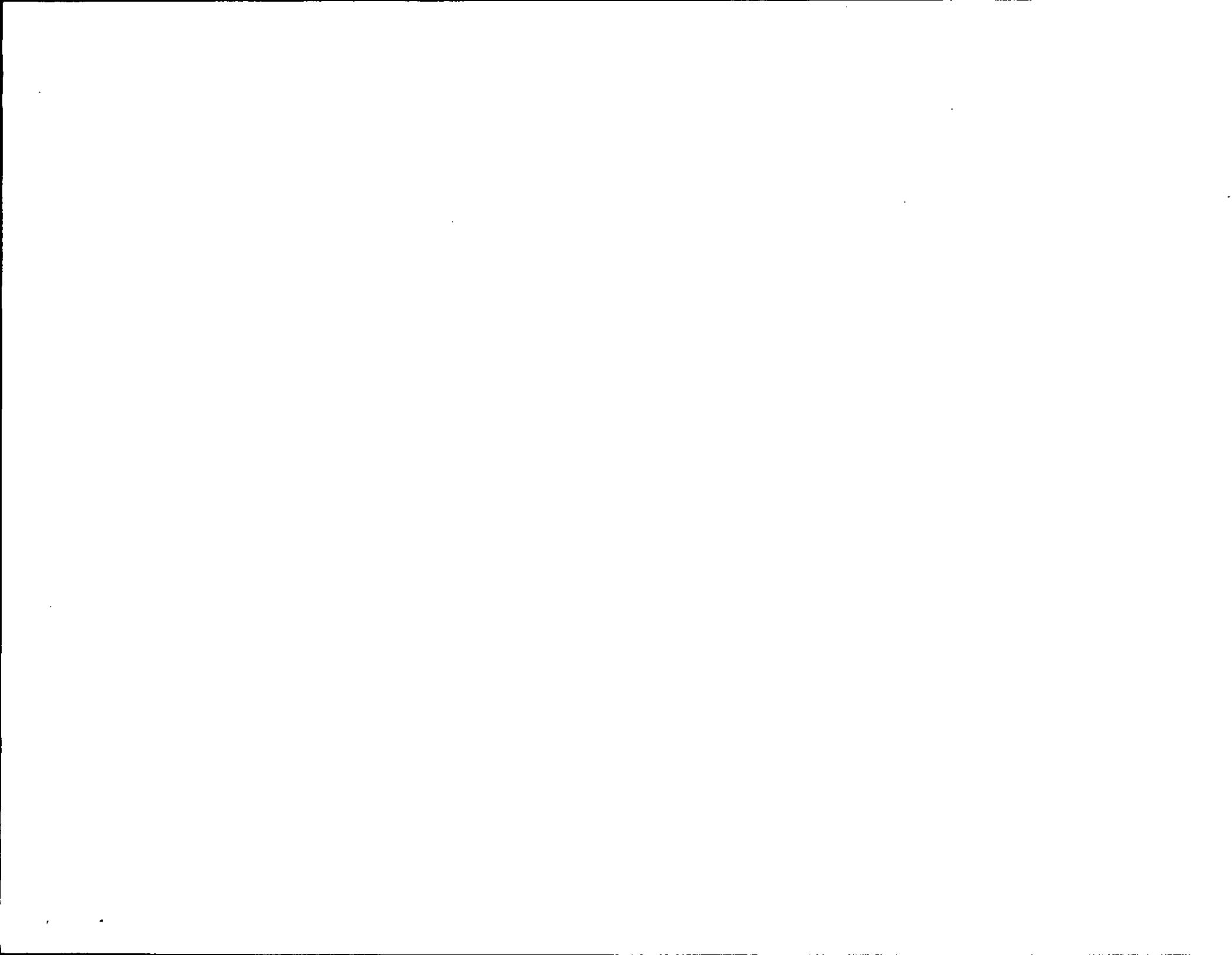
DETAIL B:
RIDGE DETAIL
PARTIAL SECTION
SCALE 1:20



610205/1

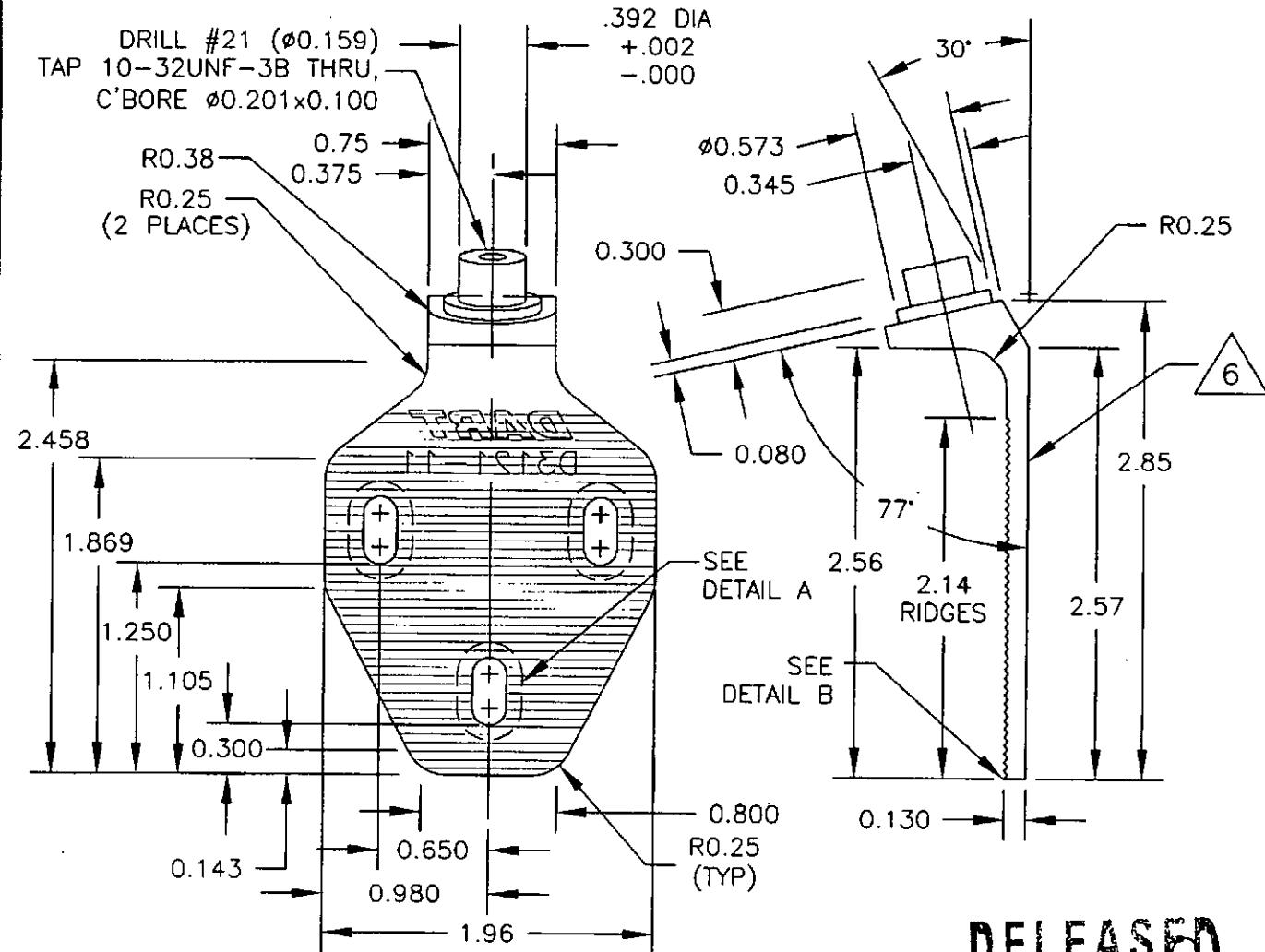
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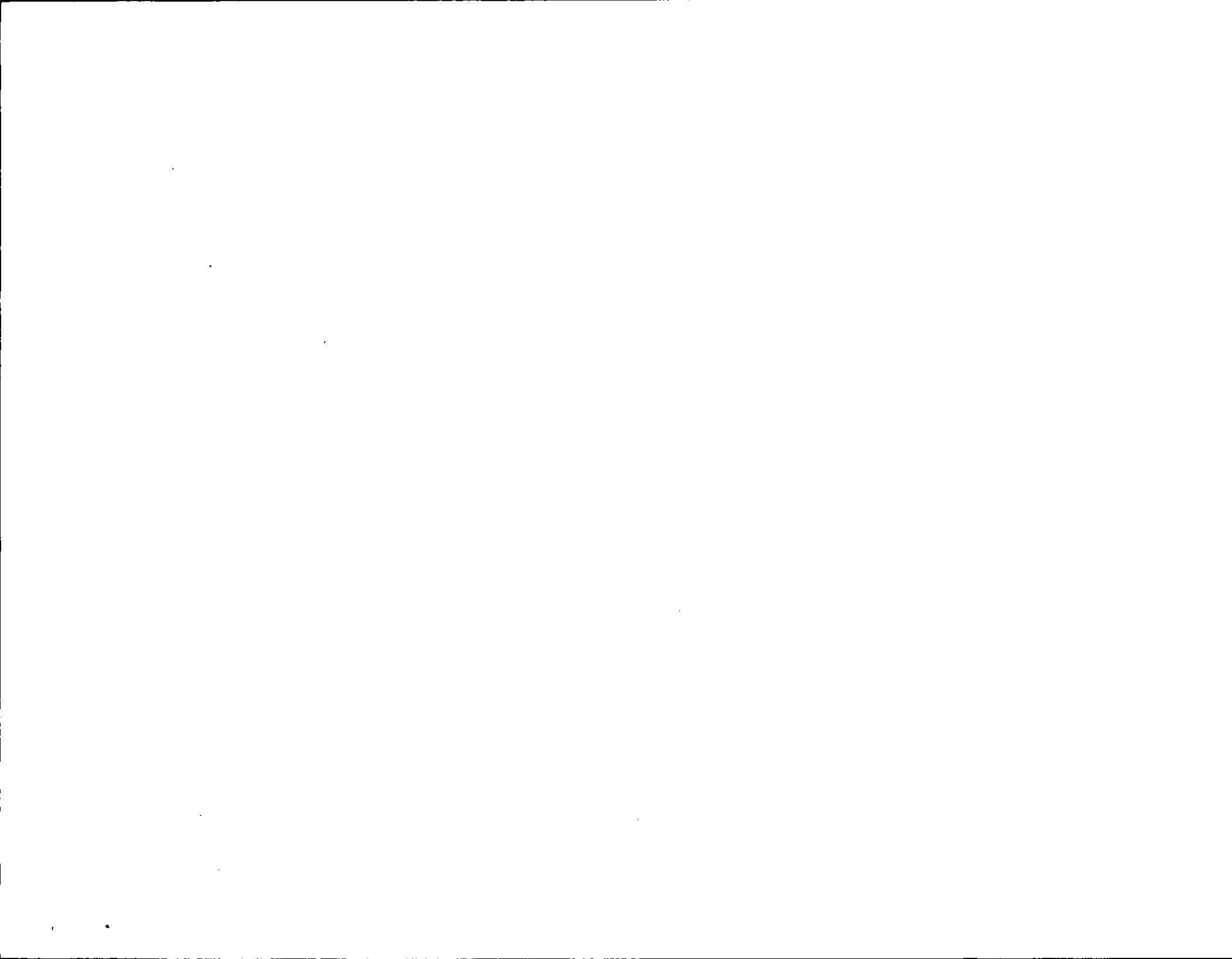
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DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3121	REV. E SHEET 4 OF 10
DATE 07.11.07		TITLE BRACKET ASSEMBLY	SCALE 1:1

**D3121-11 BRACKET**

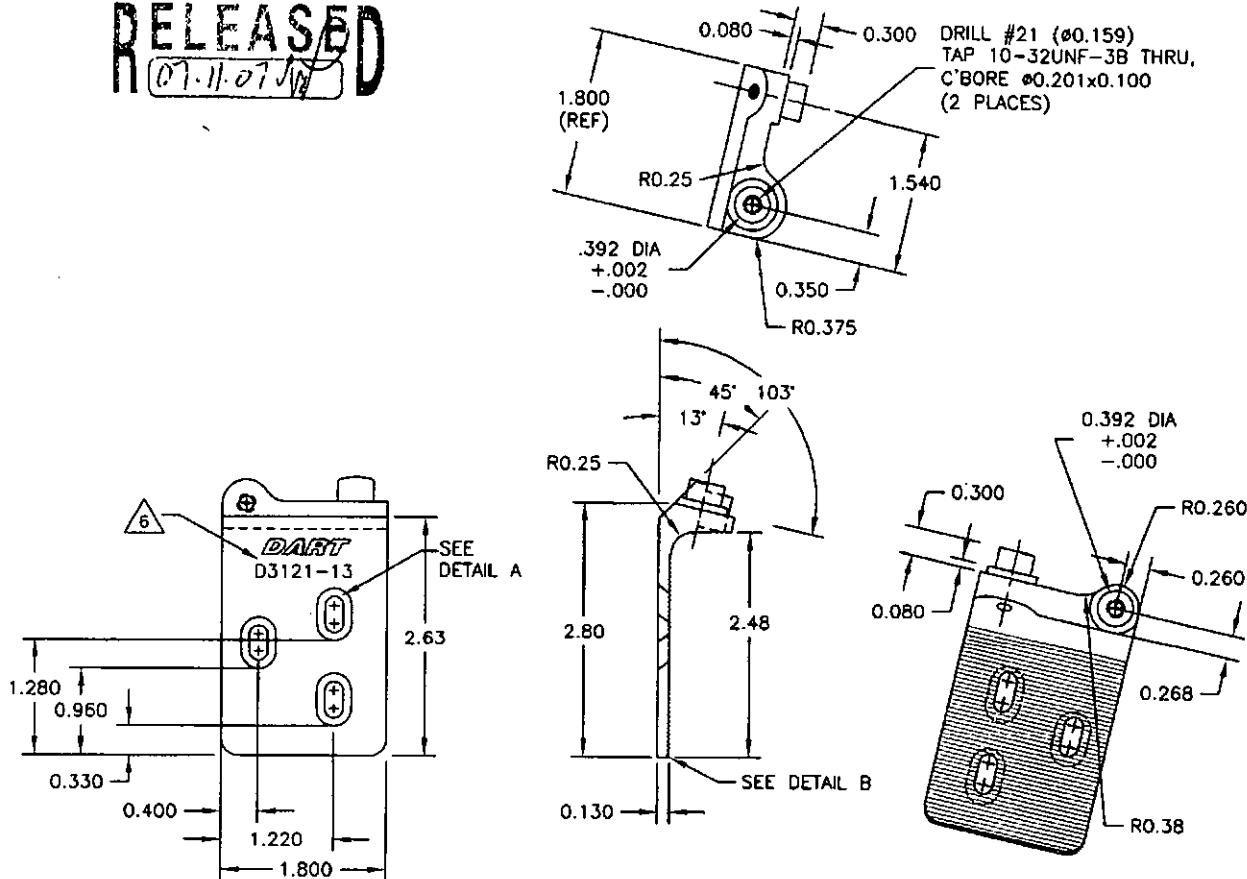
- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)
MIN ULTIMATE TENSILE = 150 ksi
MIN YIELD TENSILE = 100 ksi
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N & LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

10/25/05



DART

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CHECKED <i>#</i>	APPROVED <i>#</i>	DRAWING NO. D3121	REV. E SHEET 5 OF 10
DATE 07.11.07		TITLE BRACKET ASSEMBLY	SCALE 1:2

RELEASED
(07.11.07 JVW)**D3121-13 BRACKET (SHOWN)****D3121-14 BRACKET (OPPOSITE)**

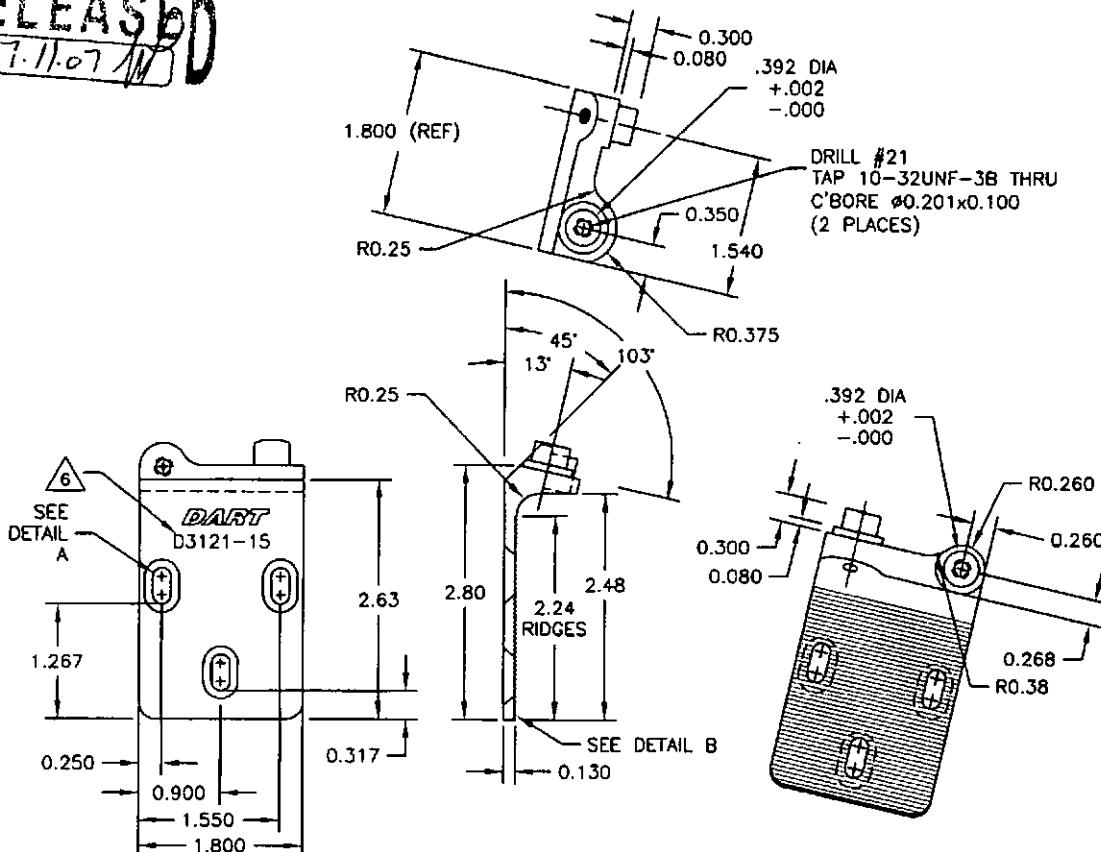
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MIN ULTIMATE TENSILE STRENGTH = 150 ksi
MIN YIELD TENSILE STRENGTH = 100 ksi
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N & LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

105
6
14



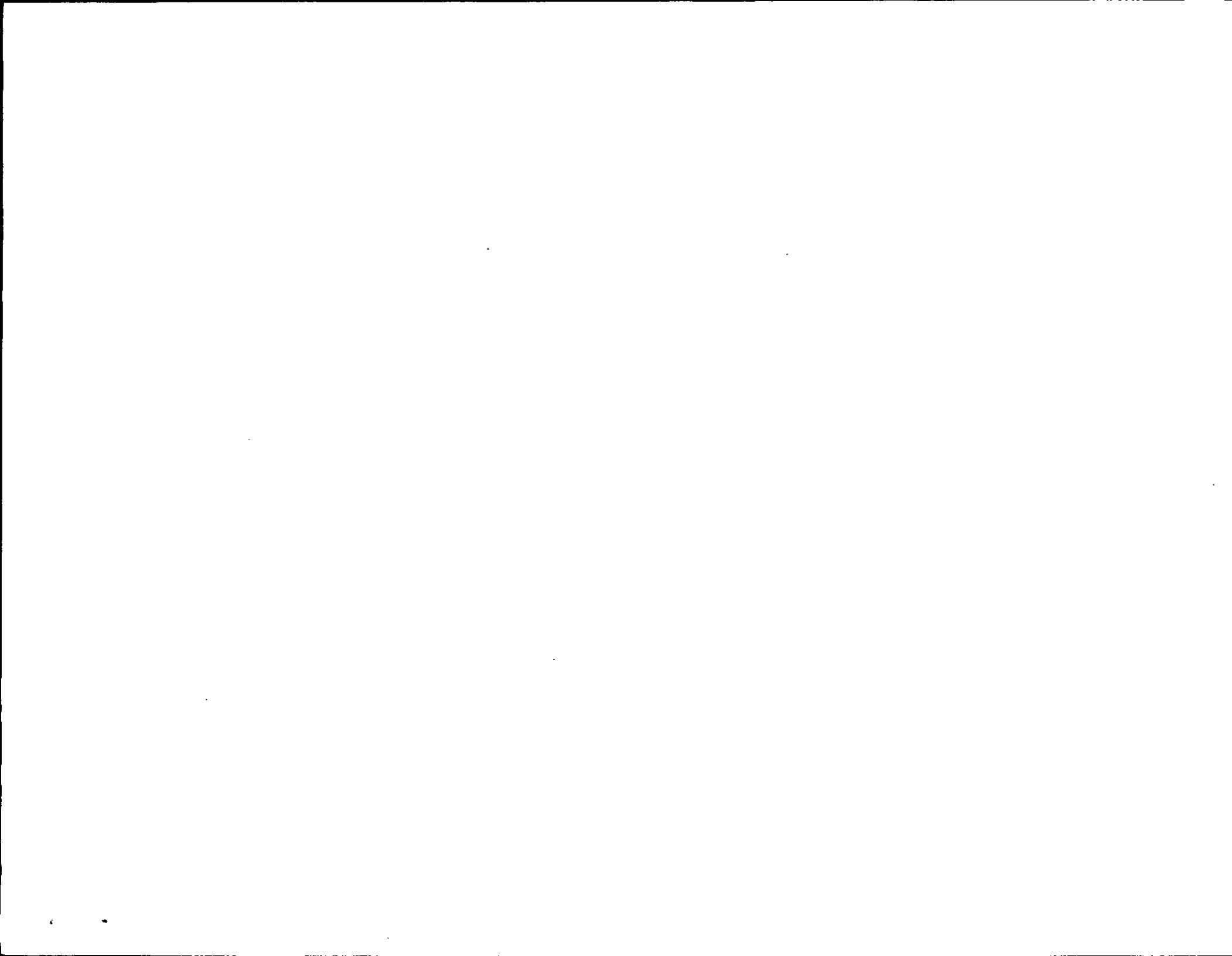
DART

DESIGN #	DRAWN BY <i>CE</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED #	APPROVED <i>CH</i>	DRAWING NO. D3121
DATE 07.11.07	TITLE BRACKET ASSEMBLY	REV. E SHEET 6 OF 10 SCALE 1:2

RELEASED
07.11.07**D3121-15 BRACKET (SHOWN)****D3121-16 BRACKET (OPPOSITE)**

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)
MIN ULTIMATE TENSILE = 150 ksi
MIN YIELD TENSILE = 100 ksi
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N AND LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

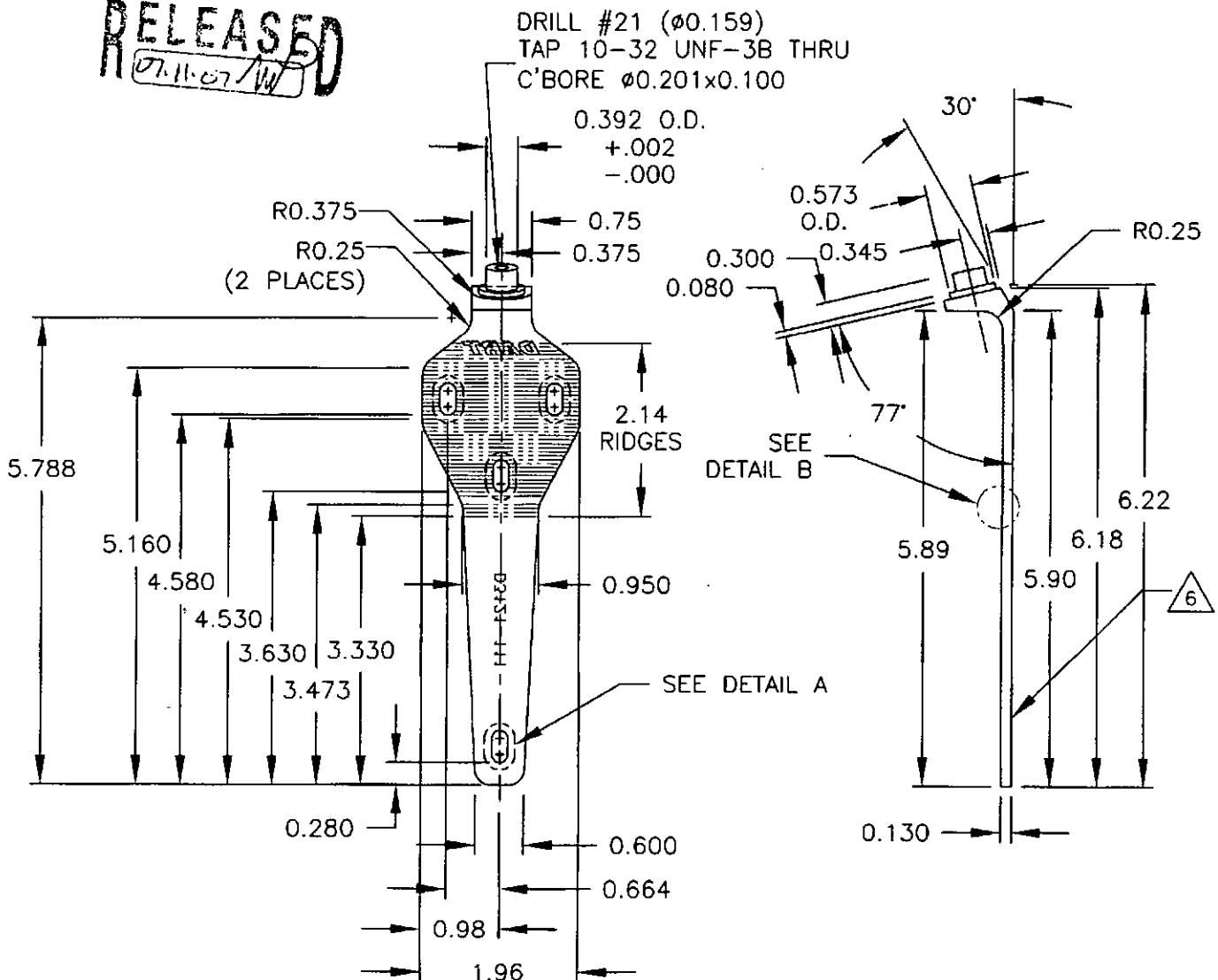
612501





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CHECKED 	APPROVED 	DRAWING NO. D3121	REV. E	SHEET 7 OF 10
DATE 07.11.07	TITLE BRACKET ASSEMBLY			SCALE 1:2

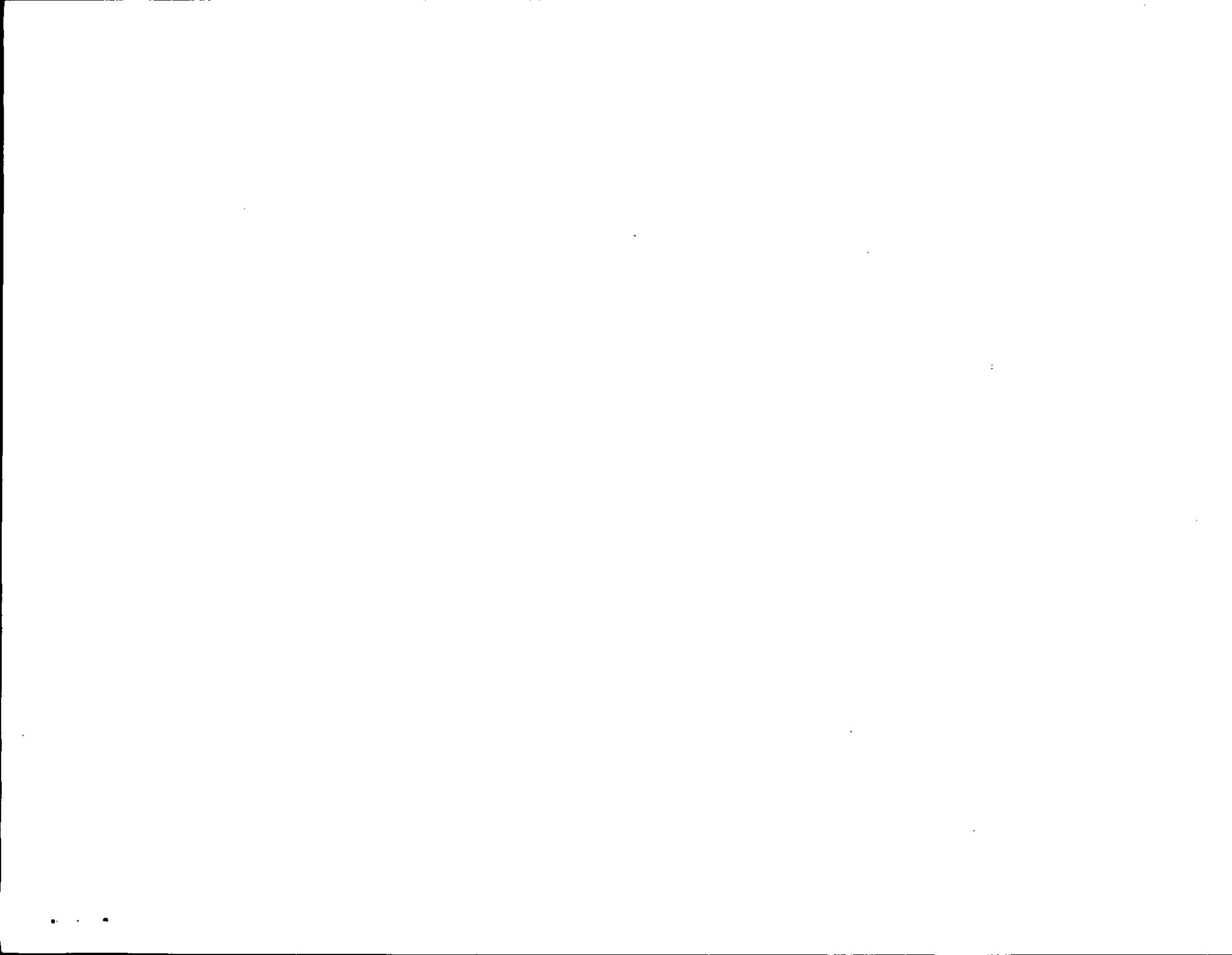
RELEASED
07.11.07 W



D3121-111 BRACKET

- 1) REPLACES PREMIER P/N B32-23001-11
 - 2) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)
MIN ULTIMATE TENSILE = 150 ksi
MIN YIELD TENSILE = 100 ksi
 - 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) ALL DIMENSIONS ARE IN INCHES
 - 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
 - 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
 - 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

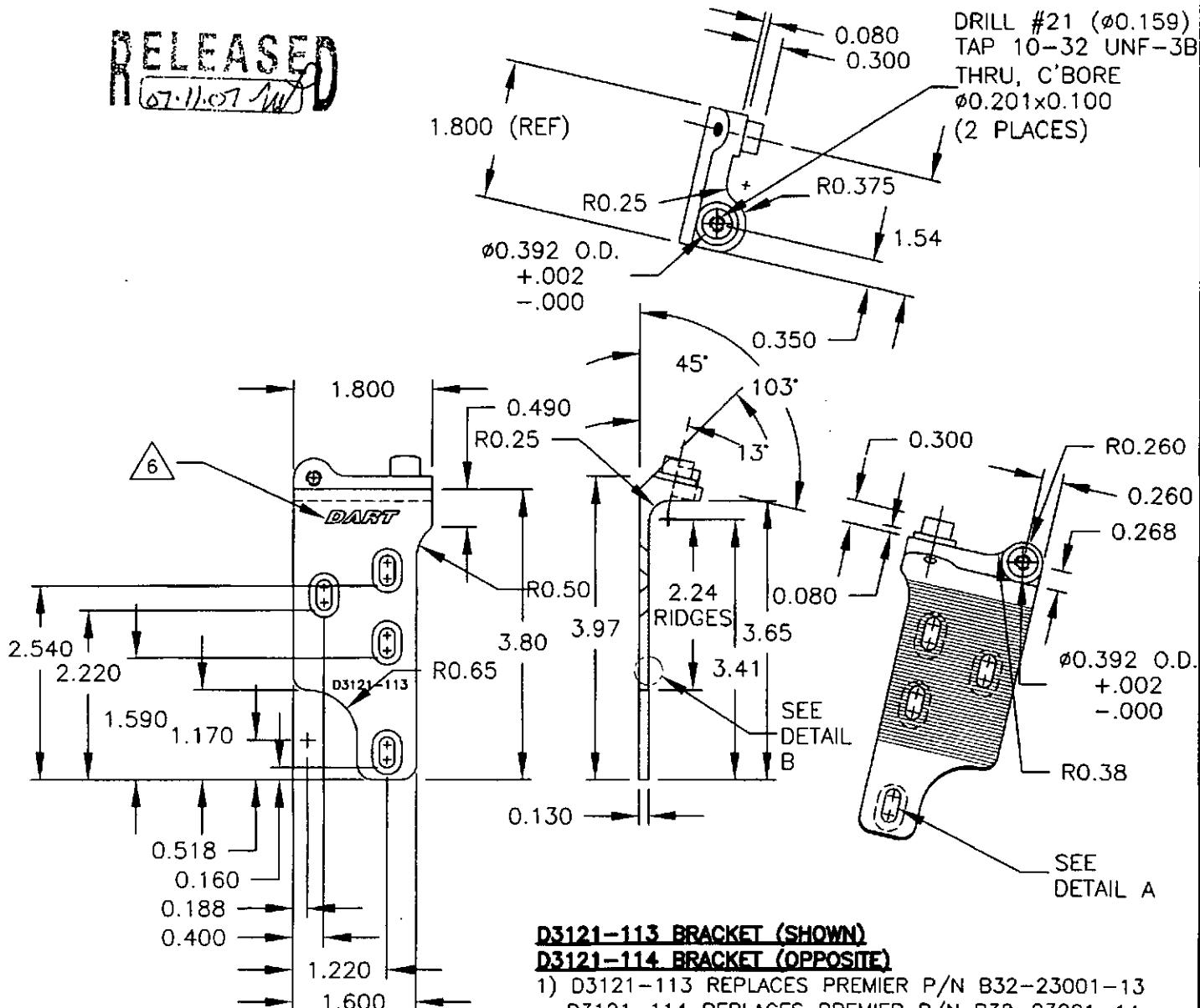
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DESIGN <i>AF</i>	DRAWN BY <i>CE</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
CHECKED <i>AF</i>	APPROVED <i>CE</i>	DRAWING NO. D3121	REV. E	SHEET 8 OF 10
DATE 07.11.07	TITLE BRACKET ASSEMBLY		SCALE 1:2	

RELEASED
07-11-07 M



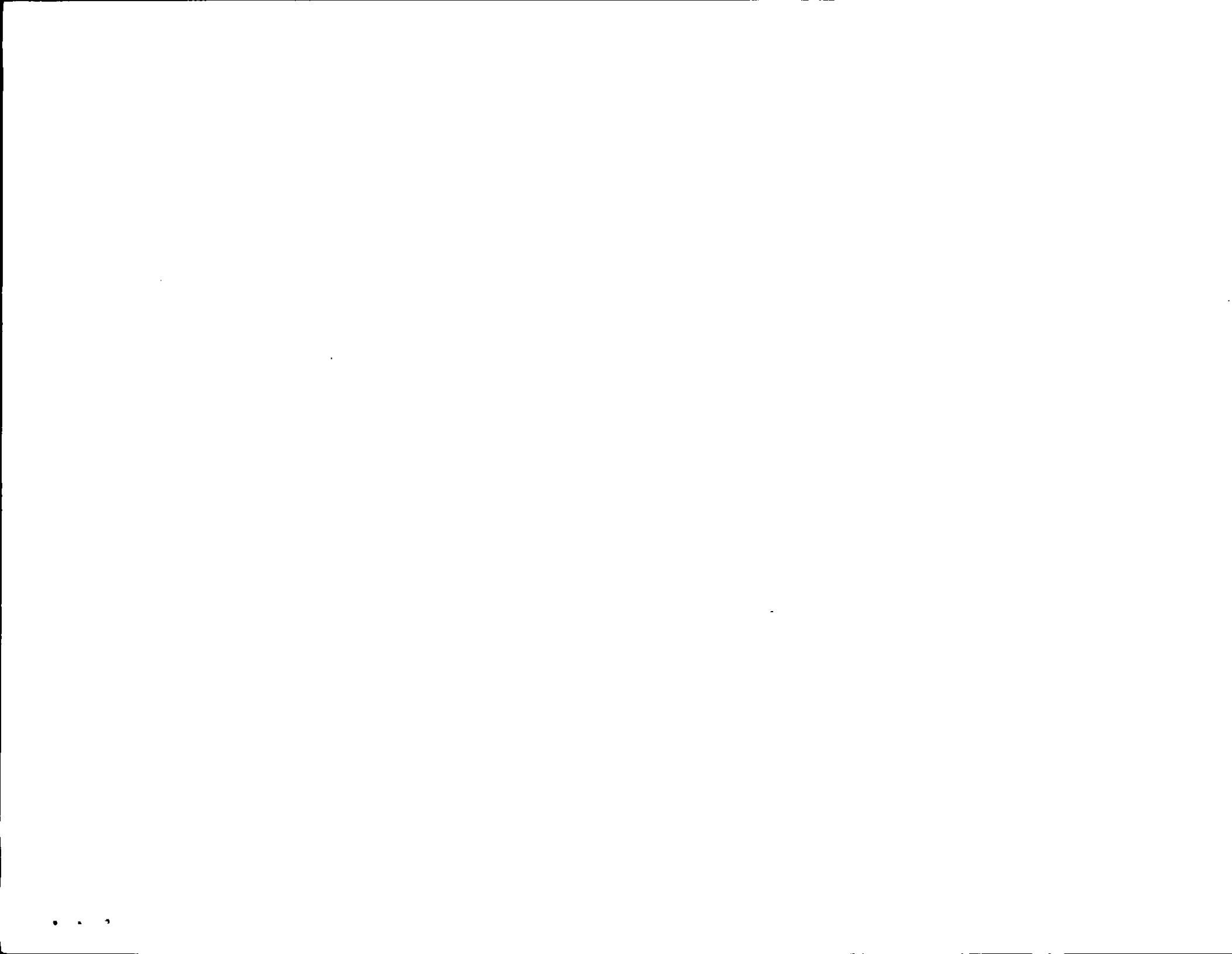
D3121-113 BRACKET (SHOWN)
D3121-114. BRACKET (OPPOSITE).

- 1) D3121-113 REPLACES PREMIER P/N B32-23001-13
D3121-114 REPLACES PREMIER P/N B32-23001-14
 - 2) MATERIAL: 17-4 SS PER AMS 5604/5643
(REF DART SPEC. M17-4-B)
MIN ULTIMATE TENSILE STRENGTH = 150 ksi
MIN YIELD TENSILE STRENGTH = 100 ksi
 - 3) TOLERANCES ARE PER DART QSI 018 UNLESS
OTHERWISE NOTED
 - 4) ALL DIMENSIONS ARE IN INCHES
 - 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
 - 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
 - 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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105619

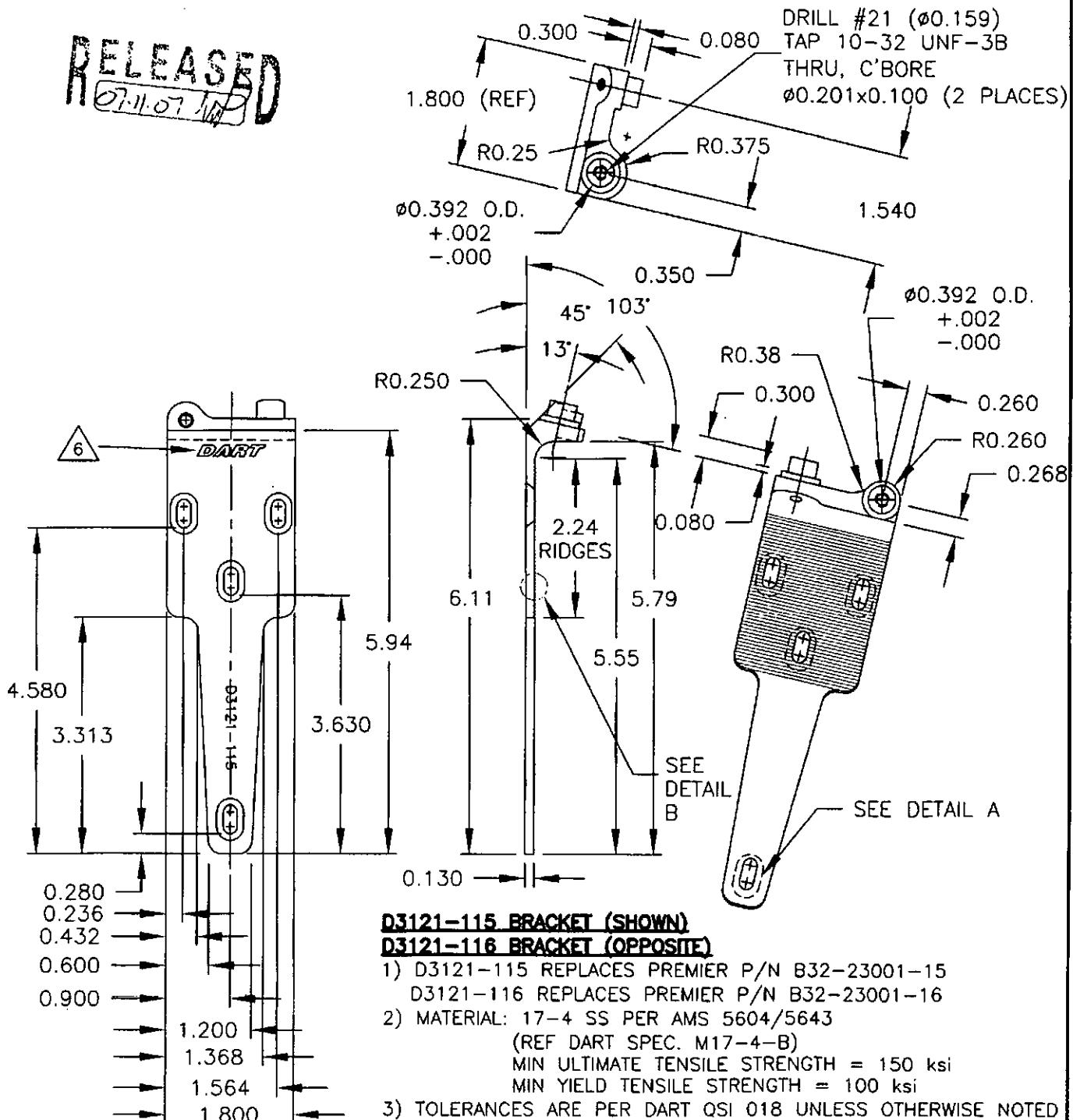




RELEASED
07-11-07 JWP

07.11.07 J.W.

DESIGN <i>CH</i>	DRAWN BY <i>CE</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
CHECKED <i>CH</i>	APPROVED CH	DRAWING NO. D3121	REV. E	SHEET 9 OF 10
DATE 07.11.07	TITLE BRACKET ASSEMBLY		SCALE 1:2	



D3121-115 BRACKET (SHOWN)

D3121-116 BRACKET (OPPOSITE)

- 1) D3121-115 REPLACES PREMIER P/N B32-23001-15
D3121-116 REPLACES PREMIER P/N B32-23001-16
 - 2) MATERIAL: 17-4 SS PER AMS 5604/5643
(REF DART SPEC. M17-4-B)
MIN ULTIMATE TENSILE STRENGTH = 150 ksi
MIN YIELD TENSILE STRENGTH = 100 ksi
 - 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) ALL DIMENSIONS ARE IN INCHES
 - 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
 - 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
 - 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

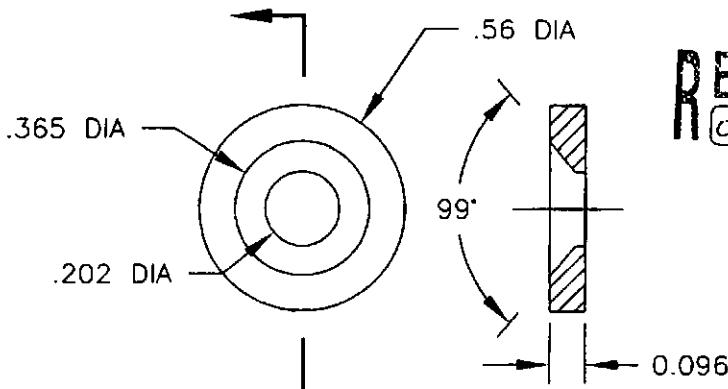
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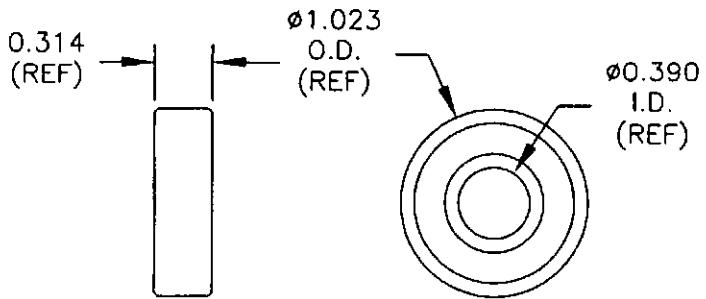


DART

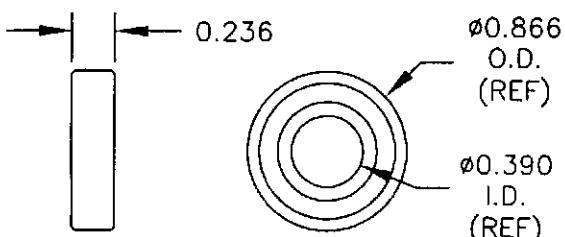
DESIGN <i>CH</i>	DRAWN BY <i>CE</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>CH</i>	APPROVED <i>CH</i>	DRAWING NO. D3121	REV. E SHEET 10 OF 10
DATE 07.11.07	TITLE BRACKET ASSEMBLY	SCALE 1:1	

**D3121-17 WASHER (SCALE 2:1)**

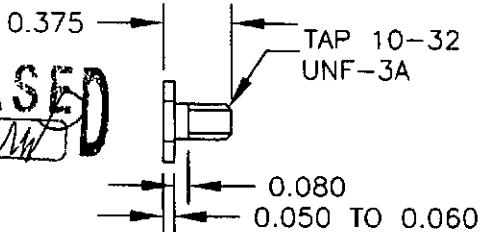
- 1) REPLACES PREMIER P/N B32-23001-17
- 2) MATERIAL: AISI 303 SS ROUND BAR, ANNEALED (REF DART SPEC. M303R)
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015

**D3121-19 BEARING (SCALE 1:1)**

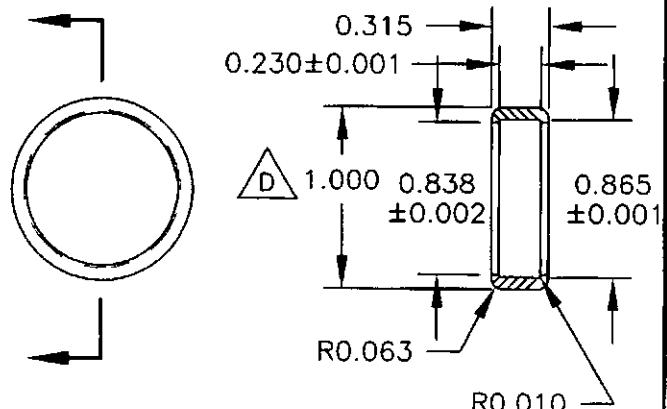
- 1) POSSIBLE SUPPLIER: KING BEARING P/N 6000-2ZJ/EM
FAFNIR P/N 9100KDD
- 2) ALL DIMENSIONS ARE IN INCHES

**D3121-23 BEARING (SCALE 1:1)**

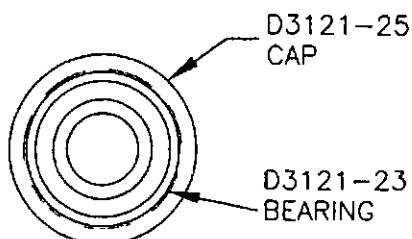
- 1) POSSIBLE SUPPLIER: SKF P/N 61900-2Z
OR KML P/N 6900-ZZ
- 2) ALL DIMENSIONS ARE IN INCHES

**D3121-21 BOLT (SCALE 1:1)**

- 1) MATERIAL: AISI 303 SS HEX, ANNEALED (REF DART SPEC. M303H0.500)
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015

**D3121-25 CAP (SCALE 1:1)**

- 1) MATERIAL: DELRIN ROD, Ø1.25 (REF DART SPEC. M-DELRIN-R1.250)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

**D3121-241 BEARING ASSEMBLY (SCALE 1:1)**

5/25/01

